

ABSTRACT

A process for fusing toner to paper. The toner fusing system for conducting this process includes a fuser roller. This roller has a base, and a fusing surface layer that includes both a fluoroelastomer continuous phase, and also a discontinuous phase dispersed through the continuous phase in the form of domains.

At the fusing temperature, the modulus of the fluoroelastomer continuous phase is greater than the modulus of the discontinuous phase. Also at this temperature, the difference between the modulus of the fluoroelastomer continuous phase and the modulus of the discontinuous phase is sufficiently great, the viscosity of the toner is sufficiently high, and the modulus of the discontinuous phase is sufficiently low, so that the image generated in the process has a gloss number of about 10 or less. Yet further, the amount of heat transmitted to the toner in the process is sufficient to fuse the toner to the substrate, while also being insufficient to raise the gloss of the image above the gloss level as indicated.